Lead Scoring Prediction

Problem Statement

- To assign a lead score to each of the leads such that the customers with a higher lead score have a higher conversion chance and the customers with a lower lead score have a lower conversion chance.

- Business expectation - A precision/lead conversion of ~80% when the model predicts it as a potential lead.

Features Selected

Based on correlation analysis post preprocessing, including missing values handling and imputation:

➔ Strong to moderately correlated categorical features with 'converted' target class - *tags, lead_quality, total_time_spent_on_website, lead_profile*

```
Numerical Features = ['total_visits', 'total_time_spent_on_website',
'page_views_per_visit']
Categorical Features = ['what_matters_most_to_you_in_choosing_a_course', 'tags']
```

Method Used

- **Logistic Regression** model is used for Classifying the Lead Conversion with high confidence.
- Model achieves a precision of 82% (as expected) correctly identifying the potential lead conversions, 82% of the times.
- The Model has a AUC score of 0.875 depictive a ***high predictive power.***

```
Accuracy: 0.8177

Confusion Matrix:   [[1069   91]
                    [ 241  420]]

Classification Report:

              precision    recall  f1-score   support

           0       0.82      0.92      0.87      1160
           1       0.82      0.64      0.72       661
```

Business Suggestions

- Focus on leads with top tags ('Closed by Horizzon,' 'Lost to EINS') as strong indicators for conversion.
- Prioritize leads with high website engagement (total time, page views) for targeted interactions.
- Address financial concerns for leads tagged 'Want to take admission but has financial issues.'
- Allocate interns to high-priority leads, and provide training for effective communication.
- During the aggressive conversion phase, focus on making personalized phone calls to the identified leads.
- Use the information from the top features to tailor your communication and address specific concerns or interests.
- Regularly monitor the outcomes of the phone call campaign and adapt the strategy based on the feedback.